# POLAR BEAR DENNING SURVEY

# WAGER BAY

# 1977

Northwest Territories Resources, Wildlife & Economic Development

103-07031/

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N.D. Ayotte

N.W.T. Wildlife Service

1980

manuscript report 1

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## ABSTRACT

A reconnaissance survey to determine polar bear (Ursus maritimus) denning locations in the Wager Bay, N.W.T. area was carried out between 25 March and 6 April 1977. The survey was hampered by poor weather and mechanical difficulties. No dens were located and no bears were seen but tracks observed indicated that bears had denned in the area.

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## INTRODUCTION

A survey was carried out in late March 1977 to look at the Wager Bay, N.W.T. region as a potential polar bear denning area. We intended to do reconnaissance over a wide area to determine where denning occurred.

## METHODS

We established a base camp on a small lake (65° 13'N, 88° 59'W) about 20 km south of Paliak Islands. That particular location was selected for the following reasons:

1. It enabled us to survey a broad range over what appeared to be potential denning area.
2. It was far enough from the coast that fog would not hamper survey time.
3. It was sufficiently far from possible bear activity to avoid bear damage to the camp.
4. It was a high elevation with limited high points which permitted better radio reception.
5. Fresh water was nearby.
6. There was sufficient room for a landing strip.

On March 21, 1977 a komatik and three 45 gallon drums of gasoline were brought into the proposed campsite via DeHavilland Twin Otter aircraft. The remainder of supplies were taken in on March 25 when camp was set up. The same aircraft was used for the duration of survey, whenever equipment had to be brought in.

Regretfully, poor weather conditions for the first 5 days prevented survey work and when weather improved, all three snowmobiles failed after 2 days. Climatic conditions are recorded in Table 1.

We used hardly any fuel and two 45 gal. drums of gasoline and two 10 gal. drums of fuel oil are now cached on the land next to the base camp.

## RESULTS

Figure 1 shows our routes and Table 2 gives details of our track observations. On April 1, an adult track (Ref. #1) accompanied by two sets of tracks were sighted on Wager Bay about 3 km northwest of Paliak Islands. The bears had been travelling southeast along the coast and headed toward land where the tracks were seen. The bears had apparently tried to construct a den, but the snow was too shallow. We followed the tracks for about 1.5 km south along the shore until they were no longer visible. The tracks were too old to take accurate measurements.

On April 2, we returned to the same location and followed the track until we lost it. We proceeded east on Wager Bay and sighted two sets of adult tracks (Ref. #2). The tracks were 2-3 days old and had been made during or before the stormy days. They were heading in an easterly direction for the shoreline. In several places seal agloos had been dug up and at one point a bloodstain on the agloo suggested that a kill had been made. Later when tracks (Ref. #3) were observed, we discovered that the bears had been resting on a high hill near shore. Each bear had dug a shallow pit. These two bears were the same as Ref. #2 and had back tracked after taking shelter. All the remaining tracks (Ref. #4,5,6) were heading in a northerly direction for Wager Bay.

Table 1. Climatic conditions March, April 1977, Wager Bay polar bear denning survey.

| Date | Days surveyed | Snow | Wind | Weather |
|---|---|---|---|---|
| March 1977 | | | | |
| 25 | - | - | Calm 40 k/hr | CAVU[1] |
| 26 | - | - | SE 50 k/hr | B.S.[2] Poor |
| 27 | - | - | SE 50 k/hr | B.S. Poor |
| 28 | - | - | E 50 k/hr | B.S. Poor |
| 29 | - | - | NE 40 k/hr | B.S. Poor |
| 30 | - | - | N 30 k/hr | B.S. Poor |
| 31 | - | - | Calm | CAVU |
| April 1977 | | | | |
| 1 | x | Deep & soft | Calm | CAVU |
| 2 | x | Deep & soft | N 8 k/hr | CAVU |
| 3 | - | - | N 30 k/hr | B.S. Poor |
| 4 | - | - | Calm | CAVU |
| 5 | - | - | Calm | CAVU |
| 6 | - | - | Calm | CAVU |

[1] CAVU - Ceiling and visibility unlimited.

[2] B.S. - Blowing Snow.

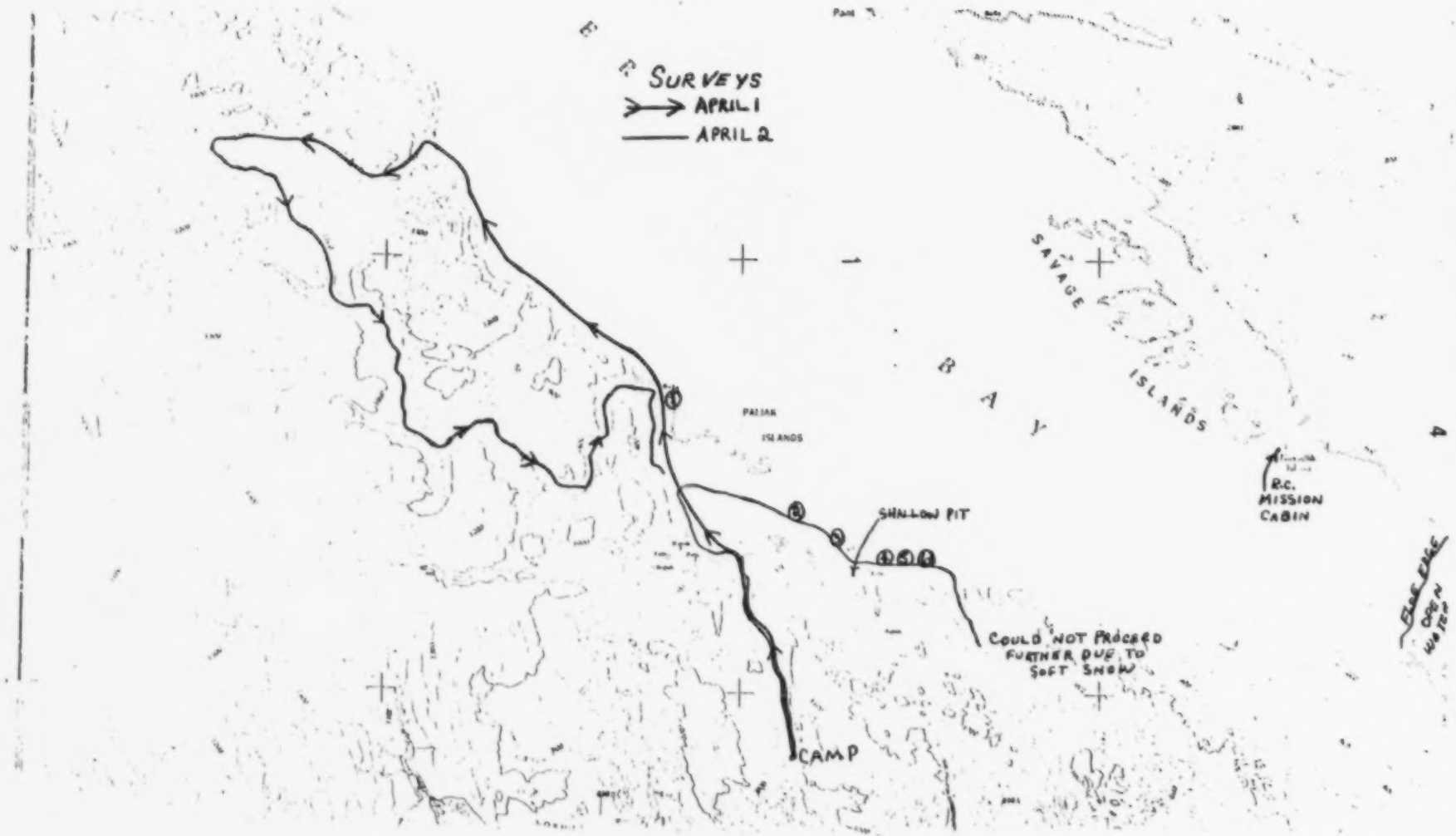


Figure 1. Survey routes for 1977 Wager Bay polar bear denning survey.

Table 2. Track observations - 1 and 2 April 1979.

| Track Ref. # | Date | Number of bears | Age | Sex | Track size Front | Track size Rear | Remarks |
|---|---|---|---|---|---|---|---|
| 1 | 1 April | 3 #1 | A[1] | F[3] | - | - | Track too old for proper measure-ment. |
| | | #2 | NC[2] | - | - | - | |
| | | #3 | NC | - | - | - | |
| 2 | 2 April | 2 #1 | A | - | - | - | Track too old for proper measure-ment. |
| | | #2 | A | - | - | - | |
| 3 | 2 April | 2 #1 | A | - | 29 cm | 44 cm | Track ob-served after bear came out of pit. |
| | | #2 | A | - | 32 cm | 47 cm | |
| 4 | 2 April | 2 #1 | A | F | - | - | Track too old for proper measure-ment. |
| | | #2 | NC | - | - | - | |
| 5 | 2 April | 1 | A | - | - | - | Track too old for proper measure-ment. |
| 6 | 2 April | 1 | A | - | - | - | Track too old for proper measure-ment. |

[1] A - Adult
[2] NC - Newborn Cub
[3] F - Presumed female

## CONCLUSIONS

Because of poor weather and mechanical difficulties, little information was gained about denning areas. However, if everything had gone well, it is doubtful that any dens would have been located as it was too late in the year. Most bears had probably come out of hibernation long before, since weather was favourable in early March. Perhaps only temporary dens would have been in use at the time of survey.

The survey did reveal however, that denning does occur in the vicinity. There appeared to be many seal agloos on Wager Bay and an available food source for polar bears. The tracks observed indicated that some bears had denned up nearby.

## RECOMMENDATIONS

1. The survey should be done 2-3 weeks earlier. The annual H.T.A. (Hunters' and Trappers' Association) conference in March 1977 conflicted with our survey.
2. A base camp could be set up at the Roman Catholic Mission cabin on Nuvudlik Island. A small lake adjacent to the cabin could be used for a water supply and landing strip. There was very little snow on the lake this year.
3. Survey efforts should be concentrated to allow good coverage of one specific area. The entire area is too vast to cover extensively in a few weeks.
4. More funds should be made available as transportation cost is a major factor.

## ACKNOWLEDGEMENTS

Two Inuit assisted with the survey. They were Luke Siksik and Robert Hickes of Rankin Inlet. Both were of great help in organizing materials prior to survey, in setting up base camp, and when travelling during the survey.

I must give praise to Ed Roth, Lambair pilot, for his ability to maneuver the aircraft under extreme conditions when landing and taking off.

I am also thankful to Ed Bowden and Sandy Wortman for their assistance in maintaining radio scheds and for the help they provided in obtaining supplies.

Appendix 1. Expenditures (approximate) for 1977 Wager Bay polar bear denning survey.

| | |
|---|---|
| Transportation | $5,300.00 |
| Supplies | 350.00 |
| Gas and oil | 375.00 |
| Rentals | 175.00 |
| Casual wages | 920.00 |
| Total | $7,120.00 |